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ABSTRACT

This data brief reviews the financial obligations of federal agencies for academic sciences and engineering activities in fiscal year 1997. Federal agencies were obligated more than 4% above the fiscal year 1996 levels. When adjusted for inflation, federal academic science and engineering activities support was up 2% in fiscal year 1997. This information was based on the latest statistics from the National Science Foundation's (NSF) annual survey of federal science and engineering support to universities, colleges, and nonprofit institutions. (CCM)

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Division of Science Resources Studies

DATA BRIEF

National Science Foundation

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Federal Academic Obligations for Science and Engineering Activities Increased More than 4 Percent in FY 1997

by Richard J. Bennof

R&D support has consistently dominated the Federal academic S&E total.

Federal agencies obligated a new high of $15.1 billion for academic science and engineering (S&E) activities in fiscal year (FY) 1997, up more than 4 percent (or $653 million) above FY 1996 levels. When adjusted for inflation, Federal academic S&E support was up 2 percent in FY 1997. The increase follows a slight (one-tenth of 1 percent) current-dollar decrease between FYs 1995 and 1996 in total Federal S&E support. This information is based on the latest statistics from the National Science Foundation's (NSF's) annual Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions.

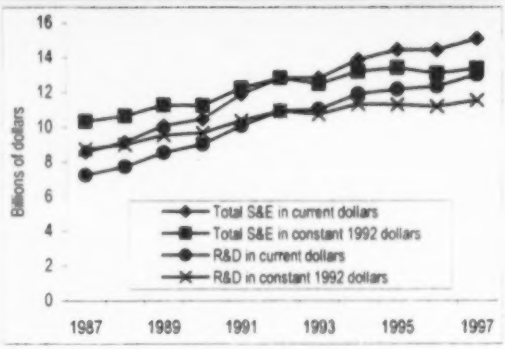
Categories of Support

Federal academic S&E funding is provided in six categories:

- research and development (R&D);
- fellowships, traineeships, and training grants (FTTG);
- R&D plant;
- facilities and equipment for S&E instruction;
- general support for S&E—that is, programs that support nonspecific or generalized purposes related to scientific research and education; and
- other S&E activities—all academic S&E support that cannot be assigned to one of the other five categories.

Of the six categories, R&D funding has consistently dominated the Federal academic S&E total in recent years, ranging from 84-87 percent of the total since FY 1987 (figure 1). A new high of $13.0 billion for Federal academic R&D in FY 1997 represented more than a 5-percent current-dollar increase (a 3-percent increase in constant dollars), or $679 million above the previous year. The Department of Health and Human Services (HHS), as in the previous year, accounted for 56 percent ($7.3 billion) of all Federal academic R&D obligations in FY 1997 as well as over two-thirds of the R&D increase.

Figure 1. Federal academic science and engineering (S&E) and S&E research and development (R&D) obligations: FYs 1987-97



SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 1997

Only two of the other five academic S&E categories showed increased funding levels in FY 1997. FTTG support was up 6 percent to a record high of $677 million; again, HHS was responsible for most of the increase. R&D plant funds rose 11 percent, with most of the increase also from HHS.

On the other hand, facilities and equipment funding for S&E instruction declined 39 percent, dropping to $30 million. Obligations for general support programs in FY 1997 totaled $171 million, a 22-percent decline mostly due to reduced funding from the Agency for International Development (AID). Funding for the final category of support, "other S&E activities", fell 3 percent to $925 million.

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Agency Sources

The six Federal agencies that accounted for the largest amounts of academic S&E obligations in FY 1997 provided 95 percent of the total. Four of these agencies—HHS, NSF, the Department of Agriculture (USDA), and the National Aeronautics and Space Administration (NASA)—reported current-dollar increases ranging from 2-12 percent (table 1). When adjusted for inflation, three of the above four agencies showed increases; the NSF S&E total, in constant dollars, was down a fraction of 1 percent. At HHS, USDA, and NASA, more than $6 of every $7 in academic S&E increases were for R&D programs.

Table 1. Federal academic science and engineering (S&E) obligations, by agency: fiscal years 1996-97

Agency	Millions of dollars		Percentage change	
	FY 1996	FY 1997	Current dollars	Constant 1992 dollars
S&E total	14,429	15,081	4.5	2.3
HHS	7,431	7,940	6.9	4.6
NSF	2,206	2,249	1.9	-0.3
DoD	1,786	1,712	-4.1	-6.2
USDA	876	980	11.9	9.5
NASA	758	821	8.2	5.9
DOE	656	646	-1.4	-3.6
All other 1/	717	733	2.3	0.1

1/ This row displays data for the following agencies: the Departments of Commerce, Education, Housing and Urban Development, Interior, Labor, and Transportation; the Agency for International Development; the Environmental Protection Agency; the General Services Administration; the Nuclear Regulatory Commission; the Office of Justice Programs; and the Social Security Administration.

NOTE: Percentages are based on unrounded numbers.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 1997

Johns Hopkins University continued as the leading university recipient of Federal academic S&E support.

University Shares

Johns Hopkins University (including its Applied Physics Laboratory) again was the leading university recipient of FY 1997 Federal academic S&E obligations (table 2). About $5 of every $6 of its $704 million total was for R&D projects, with most of the remainder applied toward "other S&E activities." The top 20 universities ranked by Federal academic S&E obligations accounted for 36 percent of the total. Eighteen of the top 20 academic S&E recipients in FY 1997 were among the leading 20 recipients in FY 1996. The new entrants for FY 1997 were Duke University (19th after being ranked 21st the year before) and the University of Pittsburgh (20th, up from 24th place in FY 1996). They replaced the California Institute of Technology (now 23rd after being ranked 18th in FY 1996) and the University of North Carolina at Chapel Hill (now 21st after being ranked 20th in FY 1996). The four top universities in FY 1996 maintained the same ordinal positions in FY 1997.

User Notes

The Federal academic S&E obligations data presented in this Data Brief were obtained from 20 Federal agencies that supply virtually all Federal academic R&D support and that participated in the FY 1997 Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions. This annual survey also collects data on Federal S&E support by funding category, type of institution, institutional ranking, and geographic distribution.

NSF makes available computer-generated Institutional Profiles for individual doctorate-granting institutions and schools with S&E departments that grant master's degrees. Institutional Profiles contain data from this survey and from NSF's other two academic S&E surveys: the Survey of Research and Development Expenditures at Universities and Colleges, and the Survey of Graduate Students and Postdoctorates in Science and Engineering. Data from the three surveys are also available via the World Wide Web (see "Electronic Dissemination," p.1) and the Computer-Aided Science Policy Analysis and Research (WebCASPAR) database system, a user-friendly Web tool for retrieval and analyses of statistical data on academic S&E resources.

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Table 2. Federal academic science & engineering (S&E) support to the top 20 universities: FY 1997

Rank	Institution	Total academic S&E	R&D	R&D plant	Facilities & equipment for S&E instruction	Fellowships, traineeships, & training grants	General support for S&E	Other S&E activities
		(Millions of dollars)						
	Total, all institutions	15,081.4	13,002.5	276.0	29.9	677.0	170.7	925.3
1	Johns Hopkins Univ 1/	703.9	587.5	1.7	0.0	19.2	1.2	94.3
2	Univ of Washington	357.0	314.9	4.6	0.1	21.4	6.6	9.5
3	Stanford University	338.3	315.7	1.1	0.0	18.3	0.3	2.9
4	University of Michigan	294.0	270.9	1.6	0.2	15.7	2.8	2.7
5	U CA San Diego	262.3	246.2	1.5	0.0	10.4	3.3	0.9
6	U of Pennsylvania	261.8	242.0	1.8	0.0	14.7	0.9	2.4
7	MA Inst of Technology	250.9	228.3	5.4	0.0	11.9	2.2	3.1
8	University of Minnesota	249.7	225.5	1.7	0.0	7.1	0.6	14.8
9	U CA San Francisco	242.5	222.0	0.0	0.0	19.4	0.3	0.8
10	Harvard University	242.0	215.9	1.0	0.0	21.8	0.5	2.8
11	Cornell University	240.8	204.5	8.9	0.0	10.5	1.2	15.7
12	U CA Los Angeles	233.8	217.0	1.5	0.1	11.0	0.4	3.8
13	Columbia U City NY	225.3	209.6	1.0	0.1	11.9	0.1	2.6
14	University of Colorado	223.6	203.7	1.3	0.0	11.7	5.1	1.7
15	U WI Madison	223.1	195.3	1.7	0.1	10.2	0.0	15.9
16	Yale University	220.9	205.3	0.4	0.0	13.7	0.4	1.1
17	Washington University	206.2	194.6	1.1	0.0	10.3	0.0	0.1
18	PA St U University Park	204.1	176.9	1.3	0.1	6.4	0.7	18.8
19	Duke University	197.1	186.9	0.2	0.0	9.4	0.1	0.6
20	University of Pittsburgh	189.3	176.7	0.1	0.0	6.9	0.9	4.6
	Total, top 20 institutions	5,366.5	4,839.3	38.0	0.6	262.0	27.4	199.2

1/ Includes funding for the Applied Physics Laboratory

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 1997

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